ENVIRONMENTAL ASSESSMENT
LIVESTOCK GRAZING AUTHORIZATION

EA Number CA 170-01-13

Allotment Number and Name(s)

6020 Little Round Valley
6044 Long Valley
6045 Tobacco Flat

BL M Bishop Field Office
Prepared
January 2002

CHAPTER 1:
INTRODUCTION

The Bureau of Land Management (BLM) is proposing to issue a 10 year long grazing permit on these allotments to authorize livestock grazing. The approximate allotment Public Land acreages are:

Allotment Name	Public Land acres
Little Round Valley	1,118
Long Valley	303
Tobacco Flat	380

The allotments are located in the Owens Valley Management Area of the Bishop Field Office. Their elevation range is between 6,800 and 8,000 feet. Vegetation communities are a mix of Great Basin Big Sagebrush and Bitterbrush.

Need for the Proposed Action

The proposed action is needed to authorize grazing in accordance with grazing regulation 43 CFR 4100 and be consistent with the provisions of the *Taylor Grazing Act, Public Rangelands Improvement Act, and Federal Land Policy and Management Act*. Action may be required to maintain or improve resource condition including rangeland health. Status of existing permit/lease: The grazing permits for these allotments will expire on 2/28/01. In accordance with the *National Environmental Policy Act* (NEPA), an Environmental Assessment (EA) must be prepared to analyze the affects of livestock grazing, in order to determine if re-authorizing the grazing permit(s) is appropriate.

Plan Conformance: The proposed action is subject to the following plan:

Bishop Resource Management Plan (RMP), approved on March 23, 1993.

The proposed action has been determined to be in conformance with this plan as required by regulation (43 CFR §1610.5-3(a)).

Remarks: The proposed action will occur in an area identified for livestock grazing in the Bishop Resource Management Plan. The proposed action is consistent with the land use decisions and resource management goals and objectives of the plan, pages 8 thru 23 and 40 thru 46.

The three allotments meet all of the Secretary of Interior's Approved Rangeland Health Standards as indicated in the BLM California Rangeland Health Environmental Impact Statement and Decisions Record of July 2000.

Rangeland Health field assessments of the Standards were completed on these dates:

Little Round Valley	July 2000
Long Valley	June 2000
Tobacco Flat	August 2001

A database detailing the results of these assessments has been completed and is located in the resources/images/range computer directory at the BLM Bishop Field Office.

Relationship to Statutes, Regulations, and Plans

Endangered Species

Several of the allotments are within the range of federally listed threatened or endangered species. However, no Endangered Species are present or likely to occur, based on historical records, field monitoring, and/or habitat suitability in these allotments. Pursuant to Section 7 of the Endangered Species Act, formal consultation with the Fish and Wildlife Service (FWS) is required on all allotments for which livestock grazing may affect listed species. The stipulations of any grazing permit may be modified to conform to the terms and conditions specified in a FWS biological opinion to minimize take of listed animal species. In addition, the terms and conditions of any grazing permit may also be modified to conform to decisions made to achieve recovery plan objectives as determined through subsequent land use plan amendments or revisions. All Section 7 consultations with FWS were completed in 2000.

Cultural Resources

California BLM has the responsibility to manage cultural resources on public lands pursuant to the 1966 National Historic Preservation Act, the 1980 Rangeland Programmatic Memorandum of Agreement with the Advisory Council on Historic Places (WO IM 80-369), the 1997 Programmatic Agreement Among the Bureau of Land Management, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers Regarding the Manner in Which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act, the State Protocol Agreement Between the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer (1998) and other internal policies.

The stipulations of any grazing permit may be modified to reflect the presence of cultural resources. Background site record and literature review will be conducted as a minimum level of review as part of the permit renewal EA. Present inventory will focus on known or suspected areas of historic ground disturbing activities associated with livestock grazing such as water sources, corrals, supplemental feeding areas, bedding areas, salt block stations. In general, following the Bishop Field Office research design for grazing assessments (Halford 1999), all areas with a high probability for the congregation of cattle and for the occurrence of significant cultural resources will be field evaluated. The results of these analyses will be used to modify

grazing permits to protect or mitigate impacts to cultural resources.

Wilderness

There are no designated Wilderness Areas or Wilderness Study Areas within these three allotments.

Water Quality

Direction for implementation of the Federal Clean Water Act (CWA) of 1972 (P.L. 92-500, as amended) is provided by the Code of Federal Regulations (40 CFR) and by a variety of USEPA guidance documents on specific subjects. To meet the requirements of the CWA on public lands, BLM is currently developing a state-wide water quality management plan under an MOU with the California Water Resources Control Board. As part of the water quality plan, BLM is required to submit a listing of Best Management Practices (BMPs) to the state and to the U.S. Environmental Protection Agency for approval. Pursuant to the decisions affecting water quality in the Bishop Resource Management Plan, BMPs for the Field Office have been submitted to meet the requirements under the CWA.

Section 4180.1 of the Grazing Administration Regulations (4180.1, Federal Register Vol 60, No. 35, pg.9970) directs that certain conditions of rangeland health exist on public lands which include the statement that "water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives....". The Standards and Guidelines for Rangeland Health in the Central California area, as it applies to surface and groundwater resources and their quality have as a primary objective to maintain the existing quality and beneficial uses of water, protect them where they are threatened (and livestock grazing activities are a contributing factor), and restore them where they are currently degraded (and livestock grazing activities are a contributing factor). In the following instances the objective becomes a higher priority :

> (a) where beneficial uses of water bodies have been listed as threatened or impaired pursuant to Section 303(d) of the CWA;
>
> (b) where aquatic habitat is present or has been present for Federal threatened or endangered, candidate and other special status species dependent on water resources; and
>
> (c) in designated water resource sensitive areas such as riparian and wetland areas.

Air Quality

The southern portion of the Owens Valley Management Area, south of Tinemaha Reservoir, falls

within a Federal Air Quality Non-Attainment/ Maintenance Area (Figure 1) and is subject to the following legal requirement:

Section 176 (c) of the Clean Air Act (CAA), as amended (42 U.S.C. 7401 et seq.) and regulations under 40 CFR part 93 subpart W, with respect to the conformity of general Federal actions to the applicable state implementation plan (SIP) apply to projects within non-attainment areas. Under those authorities, "no department, agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan". Under CAA 176 (c)and 40 CFR part 93 subpart W, a Federal agency must make a determination that a Federal action conforms to the applicable implementation plan before the action is taken.

> 40 CFR Part 93.153 Applicability.
>
> (c) The requirements of this subpart shall not apply to the following Federal actions:
>
> (iii) Continuing and recurring activities such as permit renewals where activities will be similar in scope and operation to activities currently being conducted.

The Great Basin Unified Air Pollution Control District (GBUAPCD) has state air quality jurisdiction over the Owens Valley Management Area.

CHAPTER 2:
PROPOSED ACTION AND ALTERNATIVES

Proposed Action

The proposed action is to continue present management, but with revised Terms and Conditions added to the expiring Grazing Permit. The completed Rangeland Health allotment assessments document that continuation of livestock grazing, in the same manner and degree, does comply with the intent of the Rangeland Health initiative and its Standards.

Terms and Conditions will be incorporated into the reissued Grazing Permits to ensure compliance with the Rangeland Health Standards and Guidelines and Bishop RMP decisions pertinent to livestock grazing.

A. Livestock Numbers and Season of Use

Allotment Name	Number	Kind	Season of Use	% Public Land	Permitted Use (animal unit months)	
L. Round Valley	1400	sheep	10/5 - 10/18	32	43	
					Total	43
Long Valley	2	cattle	5/1 - 10/31	100	12	
					Total	12
Tobacco Flat	8	cattle	6/16 - 10/15	100	32	
					Total	32

B. Range Improvements

There are no existing, nor any proposed new improvements, that need to be eliminated or constructed in order to maintain or achieve rangeland health.

C. Measures to Maintain or Achieve Standards (Revised Terms and Conditions of the Grazing Permit).

1. Grazing use is not to exceed 40% of annual growth on key forage species (all allotments) and leave a 4-6" stubble height on riparian vegetation.

2. No salt or other nutrient supplement placement or sheep bedding within 1/4 mile of creeks, aspen groves, meadows, sage grouse strutting grounds, or special status plant habitat.

3. No supplemental feeding (actual forage, i.e. hay) on public land or private lands that are unfenced from the public land at any time.

4. No trailing through a neighboring allotment without the BLM's authorization.

5. Grazing permits shall contain terms and conditions appropriate to achieve management and resource condition objectives for the public land, or to assist in the orderly administration of the public rangelands and to ensure conformance with the provisions of Subpart 4180 (Fundamentals of Rangeland Health and Standards and Guidelines for

Grazing Administration). This is per Subpart 4130.3 Terms & Conditions and Subpart 4130.3-2 Other Terms and Conditions.

6. The authorized officer may modify terms and conditions of the permit when the active use or related management practices are not meeting the land use plan, allotment management plan or other activity plan, or management objectives, or is not in conformance with the provisions of 4180 (Fundamentals of Rangeland Health and Standards & Guidelines for Grazing Administration). This is per Subpart 4130.3-3 Modification of permits or leases.

D. Monitoring

Monitoring would consist of documenting utilization levels to ensure that grazing use does not exceed the 40% level. This would be done annually to assure compliance with terms and conditions of the permit. No long term monitoring methods to determine condition and trend are planned. At some future date, a reassessment of rangeland health may be done using the existing methodology as comparison to current conditions.

No Grazing Alternative

This alternative would result in not reissuing a grazing permit for these allotments. As a result, grazing would be eliminated. This would be a permanent cancellation. The BLM would be required to complete an RMP Plan Amendment process in accordance with BLM Planning Regulations.

CHAPTER 3:
ENVIRONMENTAL ANALYSIS

The 18 individual resource templates below combine, by resource, the affected environment, environmental consequences, and consultation sections of required elements of the EA. They include the standard critical elements of the human environment (appendix 5, BLM NEPA Handbook, as amended) and several other resource elements commonly affected by livestock grazing.

Required Elements:

1. Air Quality

2. Areas of Critical Environmental Concern (ACEC)

There are no ACECs designated within these three allotments.

3. Cultural Resources

4. Environmental Justice

5. Farmlands, Prime or Unique

   The proposed action and no grazing alternatives would have no affect on Farmlands because none are present on any of the three allotments.

6. Flood plains

   The proposed action and no grazing alternatives would have no affect on Floodplains because there are none on the public lands on any of the three allotments.

7. Invasive, Non-native Species

8. Native American Concerns

   The Native American Tribal Councils, for the six tribes that reside within the Bishop Field Office jurisdiction, have been contacted and have not expressed any specific concerns relative to the affects of livestock grazing for these three allotments. There are general concerns that are addressed below.

9. Recreation

   The proposed action and no action alternative would have no affect on recreation because of the lack of proposed facilities or management practices that could potentially alter existing recreation uses or use patterns.

10. Social and Economic

11. Soil

12. Waste, Hazardous or Solid

    The proposed action and no grazing alternatives would have no affect on Hazardous or Solid Waste as there are no sites occurring on these three allotments.

13. Water Quality, Surface and Ground

14. Wetlands/Riparian Zones

15. Wild and Scenic Rivers

There are no designated Wild and Scenic Rivers within these three allotments.

16. Wilderness

There are no designated Wilderness Areas or Wilderness Study Areas within these three allotments.

17. Wildlife

18. Wild Horses and Burros

The proposed action and no grazing alternatives would have no affect on Wild Horses and Burros as there are no populations occurring on these three allotments.

19. Vegetation

AIR QUALITY

A. Affected Environment

All three of these allotments occur outside of a federal non-attainment/maintenance area within the Great Basin Unified Air Pollution Control District's (GBUAPCD) jurisdictional boundaries.

B. Environmental Consequences

1. Impacts of Proposed Action

Fugitive dust emissions could occur due to the soil disturbance as a result from the trampling action of the livestock when soil moisture levels are low. Support vehicle use on the access roads will generate small amounts of PM_{10} emissions throughout the grazing area and could carry soils onto the paved roads which would increase entrainment PM emissions. Ruminant animals emit methane gas which is a precursor emission for ozone. The support vehicles emit various precursor emissions for ozone. Actual emissions amounts from this grazing activity are negligible. No significant offsite impacts are anticipated.

2. Impacts of No Grazing

Same as above.

3. Cumulative Impacts

The proposed action area is within the jurisdiction of the Great Basin Unified Air Pollution Control District.

The expected emission levels are within the levels in the attainment demonstrations in the SIPs and the cumulative NAAQS 24 hour and one year PM_{10} emission standards and the one hour ozone emission standards and are not likely to result in or contribute to accedences of the National Ambient Air Quality Standards. These impacts would be the same for both Alternatives.

C. Consultation Jim Parker, Great Basin Unified Air Pollution Control District(GBUAPCD)

D. Maps GBUAPCD map of PM10 non-attainment areas (Figure 1)

E. References None

CULTURAL RESOURCES

A. Affected Environment

Located on the western fringe of the Great Basin physiographic province the Owens Valley region, incorporated within the Bishop Field Area, contains the highest archaeological site densities within the Great Basin (Basgall and McGuire 1988; Bettinger 1975, 1982). In 1981 and 1982 the BLM completed two Environmental Impact Statements (EIS) addressing grazing on public lands within the Bishop Field Area; "Proposed Livestock Grazing Management for the Benton-Owens Valley Planning Unit", 1981 and "Proposed Livestock Grazing Management for the Bodie-Coleville Planning Units", 1982. In both EIS's cultural resource reviews are limited to Class I literature searches of existing data. The general conclusion was:

> Livestock use impacts on cultural resources include: displacement (vertical and horizontal) and breakage of artifacts, and the mixing of depositional associations through trampling; destruction or enhanced deterioration of structures and features through rubbing; and an acceleration of natural erosional processes. Plants valued by Native American traditionalists could be trampled or consumed by livestock, adversely affecting plant availability at some locations. For purposes of analysis it is assumed that the impacts of livestock use are distributed in proportion to the actual distribution of livestock, with the most intensive impacts occurring at livestock use concentration areas. Cultural Resources located on lands having erosional or other types of watershed deterioration problems attributed to livestock use impacts are assumed to receive high impacts. Cultural resources are non-renewable, and impacts of livestock use on cultural

resources are cumulative (Bodie-Coleville EIS 1982:4-92).

Using existing survey data (BLM 1978; Busby et al. 1979; Hall 1980; Kobori et al. 1980), site densities were predicted to range from 9 sites per square mile (m^2) in the Benton Planning Unit to 4 sites/m^2 in the Owens Valley Planning Unit, with an average of 9.54 sites/m^2 in the Bodie/Coleville Planning units.

Previous Research on Grazing Impacts to Cultural Resources

Relatively few studies have been undertaken to address the impacts of domestic livestock grazing to archaeological resources (Archaeological Sites Protection and Preservation Notebook: Technical Notes (ASPPN) I-15, 1990; Osborn et al. 1987; Roney 1977; Thomas D. Burke, personal communication 1998), with more emphasis being placed on the effects of human trampling in site formation processes (see Nielson 1991). Nonetheless, the same conclusions have been drawn from these studies as summed by Nielson (1991).

> Intensive trampling modifies the horizontal distribution of artifacts, it obscures patterns existing in their original deposition, and eventually introduces new trends in their spatial arrangement. By producing vertical migration of materials it also can move artifacts across stratigraphic units, and mix in the same deposits items originating in different occupations. When trodden, artifacts undergo several types of damage, like breakage, micro-chipping and abrasion. The resulting traces sometimes mimic the damage produced by use or by other post-depositional processes and therefore can lead unwittingly to erroneous functional interpretations (Nielson 1991:483-484).

Variables influencing the level of impact at any given site include: 1) soil type (e.g., hard or rocky soil substrates will lead to greater artifact damage and horizontal displacement); 2) soil moisture (e.g., wet soils will lead to greater vertical displacement and stratigraphic mixing); 3) vegetation type/ground cover (depending on site landform specifics, erosion may increase as vegetation cover decreases resulting in significant secondary impacts); and 4) intensity of grazing.

The studies reviewed here are experimental tests of trampling impacts (Archaeological Sites Protection and Preservation Notebook: Technical Notes (ASPPN) I-15, 1990; Nielson 1991; Osborn et al. 1987; Roney 1977). All of the studies found that smaller artifacts (< 2 g [ASPPN 1991]) tend to migrate vertically more readily than larger artifacts thus biasing site interpretation in cases where no subsurface analyses are involved. In a controlled experiment within a portable corral, Roney (1977) found that after 40 hours, in which 78 cows were rotated through the corral, that only (5%) of 60 flaked stone artifacts could be found on the surface. The hard soil substrate was churned to a fine dust to 5 cm, 81% of the artifacts were horizontally displaced up to .75 m and 48% were damaged and broken. Roney (1977) concluded that "...cattle do produce significant physical damage to lithic artifacts."

Nielson (1991), in his assessment of human trampling, found the same trends with top soil loosening occurring to 1-2 cm on a hard soil substrate with subsoils being compacted. Again smaller items tended to migrate downward, but were less apt to move horizontally than large specimens. Sixty percent of the lithic debitage showed damage ranging from abrasion, microflaking, and breakage. As would be expected, ceramics showed the greatest level of impact with a random distribution of sizes being reduced to a skewed, unimodal distribution dominated by smaller size classes less than 30 cm in diameter. We can predict that cattle impacts would be highly magnified over Nielson's (1991) results from his studies on human trampling, but would follow the same trends.

In field visits Tom Burke (personal communication 1998), owner and principal investigator of Archaeological Research Services, Inc., has found cattle grazing to have "substantial adverse effect to archaeological site integrity". In heavy use areas mixing can occur up to 10-20 cm in most conditions and up to 30-40 cm in wet conditions. The author's field investigations corroborate Burke's assessments. As would be expected, Burke has found impacts to be highest in areas where cattle tend to congregate such as springs, water courses, troughs, shade zones, and salt licks. The zone of impact around such features extends from 25-100 meters, with a linear pattern of roughly 25 to 50 meters following stream courses. Field assessments in the Bishop Field Area support these observations.

In summary, it can be concluded that livestock grazing can have adverse effects to archaeological resources causing artifact damage, movement, and mixing. In the case of standing structures, cattle rubbing or scratching can cause severe impacts causing structure degradation and collapse (Chuck Fell, Bodie State Historical Park, personal communication 1995). Intensity of grazing, soil hardness, moisture, vegetation cover, and type are factors influencing the level and types of impacts. Erosion is a secondary impact resulting from grazing that can also have negative effects to cultural sites. The areas of greatest concern are those locations where cattle congregate and tend to spend a large percentage of their time. In zones where cattle are more dispersed, such as upland locations, it can be predicted that impacts will be mainly surficial, causing no stratigraphic mixing, but perhaps resulting in horizontal displacement of artifacts. In rocky areas and zones without sufficient feed very little to no cattle impact is expected to occur (field observations 1999).

B. Environmental Consequences

1. Impacts of Proposed Action

Cattle use on the subject allotments is generally highly dispersed. Due to the fact that no known sites occur within areas of heavy congregation, impacts to cultural properties are predicted to be minimal as a result of the proposed action.

2. Impacts of No Grazing

This alternative would eliminate all threats of damage to cultural properties that could result from the proposed action.

3. Cumulative Impacts

Cultural resources would be cumulatively affected from a variety of actions including livestock grazing. Continued trailing through a site may cause horizontal movement of artifacts, including artifact damage and wear. These types of impacts will be, generally, highly localized and would not adversely affect those properties of a given site which may make it eligible for listing on the National Register of Historic Places. Areas of continual cattle congregation and those where wallowing is prevalent can result in significant cumulative impacts to a cultural property, causing both horizontal and vertical mixing of deposits, artifact damage, and negative impacts to features such as living floors, hearths, and house structures. Due to the fact that no known sites occur within any zones of congregation on the subject allotments, no adverse impacts are predicted to occur as a result of the proposed action.

C. Consultation

Thomas D. Burke, personal communication 1998, concerning grazing impacts to archaeological resources.

Chuck Fell, Bodie State Historical Park, personal communication 1995, concerning impacts to historic buildings and resources.

D. Maps None, due to the proprietary nature of the cultural resource information.

E. References

ASPPN. 1990. Impacts Of Domestic Livestock Grazing On Archaeological Resources Archaeological Sites Protection and Preservation Notebook, Technical Notes I-15. U.S. Army Engineer Waterways Experiment Station, Vicksburg MS.

Basgall, Mark E., and Kelly R. McGuire. 1988. The Archaeology of CA-INY-30, Prehistoric Culture Change in the Southern Owens Valley, California. On File California Department of Transportation, Bishop.

Bettinger, Robert L. 1975. The Surface Archaeology of Owens Valley, Eastern California: Prehistoric Man-Land Relationships in the Great Basin. Ph.D. Dissertation, University of California, Riverside.

1982. Archaeology East of the Range of Light: *Monographs in California and Great Basic Anthropology* 1.

Bureau of Land Management. 1978. California Desert Program: Archaeological Sample Unit Records For Owens Valley Planning Unit. Unpublished report on file at the Eastern Information Center, Riverside, California

Busby, Colin I., John M. Findlay and James C. Bard. 1979. A Cultural Resource Overview of the Bureau of Land Management Coleville, Bodie Benton, and Owens Valley Planning Units, California. *Bureau of Land Management Cultural Resources. Publications, Anthropology-History*. Bakersfield District, California.

Halford, F. Kirk. 1999. A Research Design for the Bishop Field Office Grazing Allotment Assessments. Cultural Resource Project : CA-170-99-04. On file in the BLM, Bishop Field Office, Bishop, California.

Hall, M.C. 1980. Surface Archaeology of the Bodie Hills Geothermal Area, Mono County, California. United States Department of the Interior, Bureau of Land Management, Bakersfield District.

Kobori, Larry S., Colin I. Busby, James C. Bard, and John M. Findlay. 1980. A Class II Cultural Resources Inventory Of The Bureau Of Land Management's Bodie And Colville Planning Units, California. Basin Research Associates, Inc. for the U.S. Department of Interior, Bureau of Land Management, Bakersfield District Office.

Nielson, Axel E. 1991. Trampling The Archaeological Record: An Experimental Study. *American Antiquity* 56(3):483-503

Osborn, A., S. Vetter, R. Hartley, L. Walsh, and J. Brown. 1987. Impacts of Domestic Livestock Grazing on the Archeological Resources of Capital Reef National Park, Utah. *National Park Service Midwest Archeological Center, Occasional Studies in Anthropology*, No 20. Lincoln, NE.

Roney, John. 1977. Livestock And Lithics: The Effects Of Trampling. On file at the Department of Interior, Bureau of Land Management, Winnemuca District Office. Winnemuca, NV.

ENVIRONMENTAL JUSTICE

A. Affected Environment

There are no low-income or minority populations living on any of the allotments.

There are seven Native American communities in the Eastern Sierra which are near allotments.

Members of these communities do some hunting and subsistence collecting of materials from public lands on various allotments – pinyon nuts, basket weaving materials, medicinal plants, etc.

There may be some low-income Hispanic or other ethnic minorities working on various allotments, working for some of the cattle and sheep operations. Depending upon actual decisions made, there may be some impacts to certain individuals.

B. Environmental Consequences

1. Impacts of Proposed Action

Continued livestock grazing would have no affect upon any low-income or minority populations. If any changes in grazing operations are required, there may be a loss of a job to a member of a low-income or minority population. There may also be new jobs created. Any such impacts would be limited to a single job here or there and there would not be a disproportionate impact, either negative or positive, to such a group.

2. No Grazing

If there were no grazing allowed on public land, there may be a loss of some jobs to members of a low-income or minority population. Any such impacts would be limited to a single job here or there and would not be a disproportionate impact to such a group.

There might be a slight positive impact to some groups through increased availability of some resources that are collected on public lands. This would however vary by area and type of resource, and would probably be minimal.

3. Cumulative Impacts

Cumulative impacts to low income or minority populations from past, present, and reasonably foreseeable public or private actions including any actions on non federal lands would be extremely low and would not be disproportionate to impacts on other segments of the population under any of the alternatives. A "no grazing" scenario would potentially have the most negative impact, but again, would not be disproportionate to the low income or minority population.

C. Consultation

There are seven Native American communities in the Eastern Sierra which are near allotments.

When we began the allotment assessment process in 1999, these communities were all contacted by letter (January 11, 1999), with a follow-up phone call, to determine if there were any Native American concerns with the grazing program and if they would like to participate in the

allotment assessment process. The communities either said that there were no impacts or decided not to comment / participate. None indicated a desire or need to participate in the assessment process. (Consultation log available for FY99)

Each of the tribal offices was contacted again by phone on 11/30/00 and the letter of January 1999 was sent to them again (fax). Several phone calls were made to each Tribe to follow up after they received the letter. Again, they stated that there are no impacts to their communities by the grazing program that could be construed as disproportionate impacts under the Environmental Justice criteria. (Consultation log available for FY2001)

A couple of the communities expressed some specific concerns that are addressed in the Native American Consultation section of the document.

INVASIVE, NON-NATIVE SPECIES

A. Affected Environment

Allotment	Invasive Species	Estimated % Cover
Little Round Valley	Unknown	Unknown
Long Valley	Unknown	Unknown
Tobacco Flat	Bromus tectorum	10%

Currently, the density of invasive, non-native plant species is low and is not affecting native species composition or vigor on the allotment or contributing to other environmental impacts, such as fire hazard, increased erosion, or large-scale reductions in mychorrhizal densities (Bethlenfalvay and Dakessian 1984). Periodic monitoring (1-3 years) of the allotments will facilitate documenting changes in site composition and density of these non-native species.

B. Environmental Consequences

1. Impacts of Proposed Action

Provisions for grazing before seed set of these species has been included in allotment grazing stipulations. Early season grazing of these annual grasses may help reduce the spread of these invasives (Olson 1999) by reducing inputs into the seed bank of particular sites. However, if grazing does end up occurring after seed set the seed will be spread to other areas within these allotments through livestock movement and over time, depending on precipitation patterns, will likely increase the cover of these species. Other potential long-term impacts of the proposed action if weed densities increase include a reduction in native plant cover and vigor (below and above ground production), increased erosion leading to increased germination of invasive weed

seed (Evans and Young 1972) , and a reduction in mychorrizal populations. Currently, the cover values for these species is low which will likely reduce the chance for rapid spread of these species if grazing timing stipulations are judiciously complied with.

2. No Grazing

No grazing before seed set of these invasive species could increase the seedbank inputs into particular sites over time and potentially increase the density of some of these invasive, non-native species. However, no grazing would also reduce the chances that residual weed seed from sites is spread to new areas and would minimize the likelihood that the other long-term impacts discussed above would occur.

3. Cumulative Impacts

Cumulative impacts under the Proposed Action and No Grazing alternatives would include Off-highway vehicle (OHV) use that would exacerbate the spread of invasive weeds.

C. Consultation

Coordination with the California Native Plant Society, Bristlecone Chapter and livestock permitees.

D. References

Evans, R.D. and J.A. Young.1972. Microsite requirements for establishment of annual rangeland weeds. Weed Science. 18:154-161

Bethlenfalvay, G.J., and S. Dakessian. 1984 . Grazing effects on mycorrhizal colonization and floristic composition of vegetation on a semiarid range in norther Nevada. Journal of Range Management 37: 312-316

Olson , B.E. 1999. Grazing and weeds. Pages 85-97 in R.L. Sheley and J.K. Petroff, editors. Biology and management of noxious rangeland weeds. Oregon State University Press, Corvallis, Oregon.

NATIVE AMERICAN CONCERNS

A. Affected Environment

There are seven Native American communities in the Eastern Sierra. All of the communities are near, and in some cases even surrounded by, one or more allotments. None of the communities are living on an allotment. There are no treaty rights (hunting, fishing, etc.) associated with any of the communities or any of the allotments.

Some members of these communities hunt and some do some subsistence collecting of materials from public lands – pinyon nuts, basket weaving materials, medicinal plants, fire wood, etc. However, this is general use and there were no specific "traditional use areas" identified by any of the Tribes on any of the allotments. Any other traditional uses or use areas have not been divulged to this office.

Some general concerns mentioned by the Tribes are:

- They have general concerns with overgrazing and want us to control overgrazing to protect the ecosystem and ensure that it is functioning properly
- They have concerns that water (or other) developments not impact cultural sites and that they not affect deer habitat (through de-watering streams / springs, or trampling of habitat around new troughs, etc.)
- They do not want cattle grazing on top of individual burials or grave sites or within known Native American cemeteries
- They do not want sheep bedding on top of cultural sites
- They do not want BLM to use herbicides on plants that they might collect
- They do not want BLM to cut / remove pinyon

All project development proposals are examined for potential impacts prior to approval. This includes potential impacts to water sources, streams, wildlife habitat and cultural resources. This practice will continue under all alternatives.

Herbicides are used very sparingly and only in certain very restricted circumstances. Any potential application is examined for potential impacts prior to approval. This includes potential impacts to water sources, streams, wildlife habitat and cultural / traditional uses. This practice will continue under all alternatives.

There are no Pinyon in these allotments.

B. Environmental Consequences

1. Impacts of Proposed Action

The Assessment showed that there is no overgrazing in these allotments, that they are in proper functioning condition. The intent is to keep the ecosystem functioning properly.
A cultural inventory and assessment is being done as part of the allotment assessment process. This cultural inventory and assessment will identify any current problems (water projects, fences, livestock bedding areas) causing impacts to cultural sites, including burials, so that they may be corrected.

2. No Grazing

Removing grazing would generally result in fewer impacts to the natural environment, thus alleviating the Native American concerns with overgrazing, water project development, grazing impacts to cultural resources / burial sites, etc.

3. Cumulative Impacts

The cumulative impacts of doing the allotment assessments and of issuing grazing permits within the requirements of the standards and guidelines will result in the long term protection and improvement of the ecosystems found within the jurisdiction of the Bishop Field Office – better habitats for plants and animals, protection of cultural sites, etc. These improvements, coupled with continued coordination and consultation with the Tribes, should result in BLM addressing the Tribes' concerns in a manner agreeable to the Tribes.

C. Consultation

All seven Native American communities – Bridgeport, Mono Lake, Benton, Bishop, Big Pine, Ft. Independence, and Lone Pine – were contacted in January 1999 by letter, with a follow-up phone call, to determine if there were any Native American concerns with the grazing program and if they would like to participate in the allotment assessment process. The communities either said that there were no impacts or decided not to comment / participate. (Consultation log available for FY99)

Each of the tribal offices was contacted by phone on 11/30/00 and the letter of January 1999 was sent to them again (fax). Several phone calls were made to each Tribe to follow up after they received the letter. Various individuals stated some general concerns which are addressed above; but again, they stated that there are no direct specific impacts to their communities or to their community members by the grazing program. (Consultation log available for FY2001)

SOCIAL AND ECONOMIC VALUES

A. Affected Environment

Regionally livestock operations involve use of BLM, Forest Service (USFS), or City of Los Angeles Department of Water & Power lands. These three allotments have two permittees, Dave Wood for Long Valley and Tobacco Flat and Joe Echinque for Little Round Valley. There is a careful balance of head numbers and season of use for grazing these allotments, such that any substantial change of use, would negatively affect their overall operation. Having other permits or lease land available would not in itself increase flexibility.

The local economy is benefitted by these grazing operations from monies spent to establish and maintain a ranching operation and contributions to the labor force. This is true of any privately

owned business. Inyo County agriculture ranks third, behind recreation/tourism and government agency operations, as an economic production sector. Of a 100% total in agricultural values, livestock production accounted for 50%. This amounted to $ 6,765,000 or 50% of the total $ 13,477,750 agricultural production. This represents a 3% increase from 1988. On a state-wide average, for every $1.00 in agricultural production, there is a $3.00 value to the economy.

B. Environmental Consequences

1. Impacts of Proposed Action

The local economy is benefitted by these grazing operations from monies spent to establish and maintain a ranching operation and contributions to the labor force. This is true of any privately owned business. Sustaining these operations from continued use of BLM allotments would have a positive economic affect on the stability of their overall livestock operation. The social value of retaining a rural, agricultural lifestyle would be preserved and would be in keeping with the public's perception of the Owens Valley's western culture. The proposed action will not impact the social and economic stability of these ranching operations.

2. No Grazing Alternative

If grazing were terminated on these BLM allotments, there would be slight to moderate impacts to both operators. The grazing capacity of their DWP leases may not accommodate the increased use or meet DWP's management requirements of those lands. The permittees may be forced to stock fewer numbers of livestock. There would be unauthorized grazing use onto BLM lands, since their DWP lease lands are unfenced. It would not be cost effective for DWP to construct fences to contain cattle. The BLM may experience criticism resulting from this decision from its local constituency.

3. Cumulative Impacts

Cumulative impacts may arise from the increasing environmental concerns of the effects of livestock grazing on arid western rangelands from state agencies, environmental groups, and the public in general.

These concerns are also focused on the DWP's management of their ranch lease program.

C. Consultation

George Milovich, Agricultural Commissioner Inyo-Mono Counties (personal communication).

D. Maps
None

E. References - 1999 Annual Crop and Livestock Report, Inyo- Mono Counties (prepared June 1, 2000)

SOILS

A. Affected Environment

The soil classification of the allotments have been mapped in detail by the Natural Resource Conservation Service (NRCS). Two general soil types exist on the three allotments. Soils of the mountainous regions are shallow to very deep, well drained sandy loams to loams. Soils of the stony alluvial fans are very deep, well to somewhat excessively drained sands to sandy loams. Both soils tend to limit the establishment of seeds and seedling development because of the sand to cobble structure. Furthermore, soils in the three allotments are predominantly a volcanic tableland association that are very shallow which restrict water infiltration and plant rooting. These soils primarily occur on slopes and ridges. Ash loamy sands are inclusions occurring within depressions or valleys between the slopes. These soils are well drained, which provide a more favorable habitat for both grasses and mixed desert shrub species.

Erosion potential of these soils range from slight to moderate on the valley floor due to wind erosion and can be somewhat attributable to the effects of cattle grazing and hoof action which disturbs the soil surface. The erosion potential on the alluvial fans is low due to the gravelly surface texture and low occurrence of cattle use compared with the valley floor. There are no identified erosional problems on these allotments.

BLM assessed these allotment in 1999 and 2000 to determine if the rangeland health standards were being met. Specific soils standards relate to permeability and infiltration. All sites examined were found to meet the standards for soils.

B. Environmental Consequences

1. Impacts of Proposed Action

The proposed action will not result in not meeting the standards for soils.

2. No Grazing

The proposed action will not result in not meeting the standards for soils.

3. Cumulative Impacts

There will be no cumulative impacts from the proposed action.

C. Consultation

Reference to Benton Owens Valley Soil Survey as updated by NRCS.

D. Maps

None

E. References

Bishop Resource Management Plan and Environmental Impact Statement, August 1991
Benton-Owens Valley Planning Unit, Draft Environmental Impact Statement

WATER QUALITY, SURFACE, AND GROUND WATER

A. Affected Environment

Perennial surface water occurs in various forms in all allotments. Each water source is mentioned to provide a catalog for future reference. Approximately 0.2 miles of linear stream length of Whisky Creek occurs in the Long Valley allotment (6044) near the South Landing of Lake Crowley reservoir. The water quality of this stream segment is slightly degraded from sediment input due to seasonally intensive use of the riparian vegetation/stream channel from cattle grazing. Approximately 0.2 miles of Whisky Creek occurs in the Little Round Valley allotment (6020) south of Highway 395. Water quality in this stream segment is good. Livestock grazing does not occur in this portion of the allotment. In the Little Round Valley allotment Spring 9-17-1c provides a very high volume flow with good water quality. No livestock grazing occurs in this area. In the Tobacco Flat allotment (6045) Springs 9-25-1c and 10-16-1c occur immediately west of Highway 395 in Section 17. Both springs may have a thermal component based on the initial inventory. The water quality of 9-25-1c may be unsuitable for some uses due to an apparent low pH of 3.0 (indicating an acidic content). Spring 10-16-1c has a high flow with good water quality. Both springs are isolated from livestock grazing.

B. Environmental Consequences

1. Impacts of Proposed Action

Water quality should be maintained or slightly improved (Long Valley allotment) with implementation of the proposed terms and conditions.

2. No Grazing

Water quality parameters would remain at their current levels except for Whisky Creek in the

Long Valley allotment where sediment input to the stream would stop due to cattle grazing activities.

3. Cumulative Impacts
The water quality of Whisky Creek may be negatively affected over an undetermined period of time due to a substantial increase of human development in the immediate watershed of the stream. Currently some 15 houses and additional asphalt based roads have been developed in the past 2 years on a slope immediately adjacent to Whisky Creek and public land south of Highway 395. Mono County has approved a development plan for this site for 80+ homes. Runoff in the form of aromatic hydrocarbons from the asphalt road base, fertilizers from lawns and exotic plants around the homes and the alteration of the soil profile (exposing of elemental soil) in the drainage basin within the housing area will, in time, contribute constituents which will degrade the quality of the surface, and potentially subsurface, flow of water in Whisky Creek.

C. Consultation

No consultations were conducted with any person, group or agency.

D. Maps

None.

E. References

Bishop Field Office, 1986 Water Supply (perennial spring) inventory

WETLANDS/RIPARIAN ZONES (CRITICAL ELEMENT)

A. Affected Environment

Riparian areas are associated with the one stream (Whisky Creek) and 3 primary spring sources (mentioned above in the Water Quality section) among the 3 allotments. The condition of riparian habitat at the 3 springs and the segment of Whisky Creek south of Highway 395 is good. The combined amount of riparian vegetation at the springs is approximately 1.5 acres with approximately 0.25 acres along the entirety of Whisky Creek. Whisky Creek riparian vegetation north of Highway 395 is in poor condition due to summer growing period intensive cattle grazing. No proper functioning condition analysis has been conducted on the riparian sites. Whisky Creek riparian vegetation condition is dependent on and affected by the adjacent watershed condition and related human activities (see Water Quality section) and on the seasonal hydrologic cycle for surface water flow.

B. Environmental Consequences

1. Impacts of Proposed Action

The riparian habitat along Whisky Creek, north of Highway 395, in the Long Valley allotment will continue to undergo intensive grazing use by cattle. The effects of grazing on the riparian area is primarily decreased vigor, channel bank erosion, and lowering of the floodplain water table due to channel bottom down cutting. There will be no improvement in riparian vegetation condition in this area. Cattle will continue to drift on and off the City of Los Angeles, Department of Water and Power land adjacent to public land in this area and exceed the vegetation utilization standards. There is no current means to restrict cattle grazing on the public land and adhere to the required level of vegetation use.

The riparian vegetation condition on the portion of Whisky Creek to the south of Highway 395 and at the 3 springs will remain in good condition.

2. No Grazing

The riparian vegetation along Whisky Creek in the Long Valley allotment would eventually be restored to a good level of vigor with concurrent cessation of channel bank erosion. Floodplain water table would not be improved without some in-channel mechanical control of the down cutting. The current good condition of riparian vegetation at the other riparian sites would be maintained

3. Cumulative Impacts

A substantial portion of Whisky Creek riparian vegetation was eliminated with the construction of Highway 395. The current condition of riparian vegetation along both segments of Whisky Creek will remain unchanged resulting in no improvement to conditions on public land. This holds true under all alternatives.

C. Consultation

No consultations were conducted with any person, group or agency.

D. Maps

None

E. References - List any technical references used in analysis

None

WILDLIFE

A. Affected Environment

The key species and their habitats affected by grazing in all allotments are sage grouse and mule deer. For sage grouse, the largest component of high quality habitat is provided in the Tobacco Flat allotment. This area is intensively used by sage grouse throughout the year except for periods in winter when snow depth eliminates most shrub cover. Although the combined acreage of sage grouse habitat in the 3 allotments is a small proportion of habitat used by sage grouse in Long Valley, the Tobacco Flat allotment and the 40 acres of public land in the Long Valley allotment near Lake Crowley North Landing are very important habitat to sage grouse based on the large number of birds or other sign found in these areas. Habitat conditions are generally the same for sage grouse throughout these allotments where cattle actually graze; little to no understory vegetation (perennial bunch grasses and forbs) and severely hedged shrubs (primarily bitterbrush) by the end of the grazing period. Good understory vegetation cover and overhead shrub cover are essential for providing adequate habitat conditions for sage grouse occupation and particularly for nest site selection. Habitat conditions are assumed to be at a plateau and well below the potential for the area due to the effects of cattle grazing. Sage grouse population number is currently 50% of the high level recorded in 1986 since inception of strutting ground counts in 1953. This lower population level has held for the past 10 years.

For mule deer, the sagebrush/bitterbrush vegetation community is the preferred habitat type and is provided throughout the Tobacco Flat and Little Round Valley allotments. Mule deer are found in modest number using the habitat type in all but the winter period with hundreds of mule deer occupying these areas during fall and spring migration. The combined acreage of sagebrush/bitterbrush habitat provided in the 2 allotments is a small proportion of that available to mule deer on the Sierra east side. However, the structural component of much of this vegetation community likely meets the Bishop RMP desired plant community description and, therefore, is very important habitat as evidenced by the number of mule deer observed or other sign found in these areas. Mule deer use a larger proportion of the 2 allotments than sage grouse and are less affected by livestock grazing impacts, like the common use of bitterbrush which is the principle food item for mule deer. Number of mule deer using the allotments is unknown but evidence indicates a general use of the habitat throughout. The area to the west of Highway 395 is the migration corridor for the Round Valley mule deer herd.

The combination of vegetation communities like, sagebrush/bitterbrush, riparian, and mountain mahogany, provide for a diversity of other species within the songbird and small mammal groups. Songbirds likely to be found in one or more of these communities are black-throated sparrow, Brewer's sparrow, rufous-sided towhee, Brewer's blackbird, house finch, blue-gray gnatcatcher and warbling vireo as examples. The sparrows are species of special interest because they are considered sagebrush obligates and may be declining range-wide due to loss of habitat. Small mammals likely to be found are black-tail hare, Audubon cottontail rabbit, white-

tailed antelope squirrel, canyon mouse, pinon mouse, deer mouse, longtail pocket mouse, panamint kangaroo rat, western harvest mouse, long tail weasel, coyote and bobcat.

Threatened or Endangered Species: No threatened or endangered species are known to use habitat within these allotments.

B. Environmental Consequences

1. Impacts of Proposed Action

The overall habitat quality of the allotments, particularly Tobacco Flat and Long Valley, should be improved with implementation of the proposed terms and conditions. The amount of residual understory vegetation should be improved with benefit accruing to sage grouse for horizontal and vertical cover. This should provide for taller grass heights and grass density within stands of taller shrubs which is a preferred condition for sage grouse in nest site selection. Hiding cover for sage grouse should also be improved with more residual understory vegetation and improved canopy cover on some shrubs, like bitterbrush. Benefit to mule deer habitat should be found in less cropping of bitterbrush by livestock with a larger residual amount of annual leader growth available to mule deer as forage. Some improvement in hiding or thermal cover should eventually occur for mule deer with less annual cropping of grasses and shrubs.

Benefit to song bird and small mammal populations should occur due to a higher volume of plant seeds and other vegetative material remaining as food after livestock grazing. Plant cover should also be greater benefitting these species through hiding from predators and for selection of nest or burrow sites.

2. No Grazing

Wildlife habitat conditions for all species would be expected to improve to their ecological potential for density, diversity, and plant volume for the site. Wildlife species would be expected to respond favorably in their seasonal specific uses of the different vegetation communities. Responses would potentially be in the form of less time spent searching for preferred food items, greater opportunity for locating preferred nesting site conditions, improved ability to avoid predators, higher levels of recruitment and expanding their area of use, as examples.

3. Cumulative Impacts

The proposed action would be expected to moderately improve habitat conditions for sage grouse, slightly improve habitat conditions for mule deer and moderately improve conditions for all other species on the 3 allotments. Regional actions like the current construction of 15 new homes, with the potential for an additional 60+ other homes to be constructed between Whisky Creek and Hilton Creek, will negatively impact the movement of mule deer through the Long Valley portion of the migration corridor. This impact is likely to be substantial due to the

presence of Highway 395, the existing dense residential community at Hilton Creek, other existing roads in the area and the topography of Long Valley which, combined, forces mule deer to choose between negotiating steep slopes south of the Hilton Creek community or a very narrow strip of public land between Highway 395 and the new housing area at Whisky Creek. An even greater number of mule deer are likely to be killed, which is already substantial in number, on Highway 395 and other secondary roads in this area in the future. The ability of mule deer to negotiate obstacles and survive their movement through the migration corridor is expected to continue the current decline as additional human development is approved by Mono County in this region. These developments within the corridor will offset the small positive change in habitat condition on public land.

C. Consultation
None

D. Maps

None

E. References

Bishop Field Office, Unit Resource Analysis, Step III, 1978

VEGETATION (Upland)

A. Affected Environment

A baseline range inventory for these allotments was completed in 1977 and correlated to the recently completed 1999 NRCS soil/vegetation inventory to document plant cover and composition as well as develop update ecological site descriptions. The allotments occur in the Great Basin Physiographic Province. The dominant plant community is sagebrush steppe with inclusions of mountain brush communities dominated by mountain mahogany (*Cercocarpus ledifolius)* (Barbour and Major 1977). Plant compostion based on cover is approximately 80% shrubs, 15 % grasses and 5% forbs. Sagebrush species include mountain big sage (*Artemisia tridentata* ssp. *vaseyana*), big sagebrush (*Artemisia tridentata* ssp. *tridentata),* and low sage (*Artemisa arbuscula).* Bitterbrush (*Purshia tridentata)*, desert peach (*Prunus andersonii)* and rabbitbrush (*Chrysothamnus)* species are subdominant. Understory species are varied and consist of native perennial bunch grass species; western needlegrass (*Achnatherum occidentalis)* ,Indian rice grass (*Achnatherum hymenoides),* Great Basin wild rye (*Leymus cinereus),* and squirrel tail (*Eymus elymoides)* as well as perennial and annual forbs in the Astragalus, Eriogonum, Eriastrum, Gilia Lupinus, and Phlox genera.

The majority (80-90%) of these plant communities within these allotments have not been

significantly impacted by livestock grazing because of the infrequent use and low number of animals that make use of these allotments as well as the general topography and rough terrain which reduces livestock access. Generally, utilization of key forage species, e.g. perennial bunch grass species and bitterbrush is slight to moderate and occurs throughout early and late summer (June-August). Forage capacity on these allotments is moderate to high and the plant communities are capable of withstanding moderate (40%) use without long-term impacts to ecological function including plant vigor, seedling recruitment and recovery (Beetle *et. al* 1961, Jasmer *et. al* 1984).

B. Environmental Consequences

1. Impacts of Proposed Action

Impacts of the Proposed Action on the vegetation within these allotments is directly effected by grazing timing, intensity and stocking rates. Current stocking rates are low and do not significantly impair the large-scale ecological function of these plant communities during non-drought years. The key forage species which receives the most use at early summer turn-out are the perennial bunch grasses. Continued grazing at current levels will affect very small portions (in the vicinity of water troughs and mineral blocks) of the allotments and not contribute to reductions in overall plant community ecological function as long as current Rangeland Health Guidelines are adhered to, e.g. 40% utilization. There may be increases in invasive weeds in proximity to high concentration use areas e.g. watering facilities and mineral blocks in the Tobacco Flat Allotment which contains cheat grass (*Bromus tectorum)*. Early season grazing of these cheatgrass inclusions could reduce their spread to other portions of the allotment.

2. No Grazing

Under the No Grazing alternative no impacts to the ecological function of these plant communities will take place.

3. Cumulative Impacts

Cumulative impacts may include changes in Department of Water and Power allotment management which could prompt permittees to seek out more grazing opportunities on Public Land.

C. Consultation

Coordination with the California Native Plant Society, Bristlecone Chapter and allotment permittees.

D. Maps

Allotment Assessment Maps

Preparer(s):	Jeff Starosta	Range Conservationist
	Anne Halford	Botanist
	Terry Russi	Wildlife Biologist
	Joe Pollini	Recreation/Wilderness
	Kirk Halford	Archeologist
	Doug Dodge	Supervisory Resource Management Specialist

Date: _____

Received by: _____ **Date:** _____
Environmental Coordinator

FINDING OF NO SIGNIFICANT IMPACTS

I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined that the proposed action will not have any significant impacts on the human environment and that an EIS is not required.

There will be no effect on threatened or endangered species as a result of the action.

I have determined that the proposed project is in conformance with the Bishop Resource Management Plan, which was approved March 25, 1993. This plan has been reviewed, and the proposed action conforms with the land use plan terms and conditions as required by 43 CFR 1610.5.

It is my decision to implement the proposed action and issue 10-year grazing permits with the currently used standard grazing stipulations to the grazing operators for the three allotments. Livestock grazing management on these three allotments will remain unchanged from past use, but subject to adherence with the Central California Rangeland Health Standards and Guidelines and RMP decisions pertaining to livestock use. The Rangeland Health Assessments conducted, indicate that there are no significant environmental impacts from current use and the allotments all meet the Rangeland Health Standards.

Authorized Official:

Steve
Addington
Field Manager, Bishop Field Office

Date: _____